

Remarks**BEST AVAILABLE COPY**

Claims 8-9, 11-18, 22-23, 25-27, and 31-34 are pending, and new claims 38-49 are added. Claims 13-15 have been withdrawn. By this amendment, Applicants have canceled claims 1-2, 4-7, 10, 19-21, 24, 28-30, and 35-37 without prejudice or disclaimer.

Applicants have amended claim 9 to correct a typographic error. Applicants have also amended claim 16 to make it dependent from claims 8 and 9. Both claims 8 and 9 have been indicated allowable. In addition, Applicants have amended claims 22, 25 and 31 to replace the term "the complement" with "the full complement," as suggested by the Examiner. Moreover, Applicants have amended claims 31-33 to substitute the term "stringency condition" for "stringent condition." Applicants have also amended claim 31 to replace "conditions A to R" with "conditions A, C, E, G, I, K, M, O, and Q", claim 32 to replace "conditions A to L" with "conditions A, C, E, G, I, and K," and claim 33 to replace "conditions A to F" with "conditions A, C, and E." Furthermore, Applicants have amended claim 31 to recite "the length of said polynucleotide is at least 75% of that of SEQ ID NO:1." This amendment is supported at least by paragraph 36 of the substitute specification submitted by Applicants on July 15, 2004 (hereinafter "the specification").

New claims 38-49 are added. Claims 38 and 39 are supported at least by paragraphs 7-8 of the specification. Claim 40 is supported at least by Table 2 of the specification. Claim 41 is supported at least by paragraph 91 of the specification. Specifically, the PCR amplification described in paragraph 91 utilizes SEQ ID NOs: 33 and 34 as the 5' and 3' primers, respectively, which produces an open reading frame consisting of codons 63 to 269 of SEQ ID NO:1. Claims 42-49 are supported at least by original claims 2-3 and 6-7 and paragraphs 7-8 of the specification.

Applicants respectfully submit that the amendments to the claims do not introduce new matter. Accordingly, entry of the amendments is respectfully requested.

Claims Rejections Under 35 U.S.C. §112 (Written Description Rejection)

On page 2, the Office Action rejects claims 1-2, 4-7, 10, 16-18, and 35 under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. Applicants respectfully traverse the rejection.

As indicated above, Applicants have canceled claims 1-2, 4-7, 10, and 35 without prejudice or disclaimer, thereby rendering the rejection of these claims moot. Accordingly, withdrawal of the §112 rejection of these claims is respectfully requested.

Regarding claims 16-18, Applicants have amended claim 16 to make it dependent from claims 8 and 9, both of which have been indicated as allowable. Accordingly, Applicants respectfully submit that claim 16 is now allowable also. Because claims 17 and 18 depend from claim 16, Applicants respectfully submit that claims 17 and 18 are also allowable.

Based on the foregoing, Applicants respectfully submit that claims 16-18 overcome the §112 rejection and, therefore, satisfy the written description requirement. Accordingly, reconsideration and withdrawal of the §112 rejection of claims 16-18 are respectfully requested.

Claim Rejections Under 35 U.S.C. §112 (Enablement Rejection)

On pages 2-3, the Office Action rejects claims 2, 6-7, 10, 16-18, and 23-30 under 35 U.S.C. §112, first paragraph, for nonenablement. Applicants respectfully traverse the rejection.

Applicants have canceled claims 2, 6-7, 10, and 28-30 without prejudice or disclaimer, thereby rendering the rejection of these claims moot. Accordingly, withdrawal of the §112 rejection of these claims is respectfully requested.

As noted, Applicants have amended claim 16 to make it dependent from allowable claims 8 and 9. Accordingly, Applicants believe that claim 16 and claims 17 and 18 dependent therefrom are now allowable. Accordingly, reconsideration and withdrawal of the §112 rejection of claims 16-18 are respectfully requested.

Applicants have submitted a new "Declaration Concerning Deposits under the Budapest Treaty" (hereinafter the "Declaration"), which includes all statements underlined on page 3 of the Office Action. In addition, Applicants respectfully direct the Examiner's attention to paragraphs 28 and 31 of the specification, in which deposits pEK196 and BBP1-fl are identified by their accession numbers, name and address of the depository authority, and the related taxonomic description.

Based on the foregoing, Applicants respectfully submit that deposits pEK196 or BBP1-fl satisfy the requirements under the Budapest Treaty. Accordingly, reconsideration and withdrawal of the §112 rejection of these deposits are respectfully requested.

Claims Rejections Under 35 U.S.C. §112 (Enablement Rejection)

On pages 4-6, the Office Action also rejects claims 10, 16-18, and 31-35 under 35 U.S.C. §112, first paragraph, for nonenablement. Applicants respectfully traverse the rejection.

Applicants have canceled claims 10 and 35 without prejudice or disclaimer, thereby rendering the rejection of these claims moot. Accordingly, withdrawal of the §112 rejection of claims 10 and 35 is respectfully requested.

In addition, as noted, Applicants have amended claim 16 to make it dependent from allowable claims 8 and 9. Therefore, Applicants believe that claim 16 and claims 17 and 18 dependent therefrom are now allowable. Accordingly, reconsideration and withdrawal of the §112 rejection of claims 16-18 are respectfully requested.

On page 5, the Office Action contends that "Table 1 of the instant application (pages 9-10) does not set forth a set of completely fixed hybridization processes" and that the hybridization "temperatures needed to adequately limit the claims commensurate with the disclosure are missing from Table 1 because the temperatures are not presented as a set temperature (e.g., 42 degrees, etc.) but as a variable temperature to be determined by the G/C content of every single one of the hybridizing species of nucleic acids encompassed by the broad claims." Applicants have amended claim 31 to recite that "the length of said polynucleotide is at least 75% of that of SEQ ID NO:1." This amendment is supported at least by paragraph 36 of the specification. Because SEQ ID NO:1 consists of 810 nucleotides, the polynucleotide recited in claim 31, as amended, comprises at least about 607 nucleotides. Therefore, the conditions for hybridization of a polynucleotide recited in claim 31 to SEQ ID NO:1 include conditions A, C, E, G, I, K, M, O, and Q of Table 1, all of which have definite hybridization and wash temperatures.

Based on the foregoing, Applicants respectfully submit that the above amendment to claim 31 obviates the Examiner's rejection. Because claims 32-34 depend from patentable claim 31, Applicants respectfully submit that these claims are also patentable. Accordingly, reconsideration and withdrawal of the §112 rejection of claims 31-34 are respectfully requested.

Claims Rejections Under 35 U.S.C. §112 (Indefiniteness Rejection)

On pages 6-7, the Office Action rejects claims 10 and 16-35 under 35 U.S.C. §112, second paragraph, for reciting the stringency conditions in Table 1 and the term "the complement." Applicants respectfully traverse the rejection.

As noted, Applicants have canceled claims 10, 19-21, 24, 28-30, and 35 without prejudice or disclaimer, thereby rendering the rejection of these claims moot. Accordingly, withdrawal of the §112 rejection of these claims is respectfully requested.

In addition, for the reasons set forth above, Applicants believe that claims 16-18 are now allowable. Accordingly, reconsideration and withdrawal of the instant §112 rejection of these claims are also respectfully requested.

Applicants have amended claims 22 and 25 to replace the term "complement" with "full complement," as suggested by the Examiner. Applicants believe that this amendment obviates the Examiner's rejection of claims 22 and 25. Because claim 23 depends from patentable claim 22 and claims 26 and 27 depend from patentable claim 25, Applicants believe that claims 23 and 26-27 are also patentable. Accordingly, reconsideration and withdrawal of the §112 rejection of claims 22-23 and 25-27 are respectfully requested.

Furthermore, Applicants have amended claim 31 to replace the term "complement" with "full complement." In addition, Applicants have amended claim 31 to recite "the length of said polynucleotide is at least 75% of that of SEQ ID NO:1." As discussed above, the polynucleotide recited in claim 31, as amended, comprises at least about 607 nucleotides. Accordingly, the conditions for hybridization of a polynucleotide recited in claim 31 to SEQ ID NO:1 include definite hybridization and wash temperatures. Accordingly, Applicants respectfully submit that claim 31 satisfies the definiteness requirement under 35 U.S.C. §112, second paragraph. Because claims 32-34 depend from patentable claim 31, Applicants believe that claims 32-34 also satisfy the definiteness requirement under 35 U.S.C. §112, second paragraph. Based on all of the above reasons, Applicants respectfully request that the Examiner reconsider and withdraw the §112 rejection of claims 31-34.

Claims Rejections Under 35 U.S.C. §102(a)

On pages 7-8, the Office Action rejects claims 31-35 as being anticipated by Bonaldo *et al.*, GENOME RES., 6:791-806 (1996) (hereinafter "Bonaldo"). Applicants respectfully traverse the rejection.

Applicants have canceled claim 35 without prejudice or disclaimer, thereby rendering the rejection of claim 35 moot. Accordingly, withdrawal of the §102(a) rejection of claim 35 is respectfully requested.

As noted, Applicants have amended claim 31 to recite "the length of said polynucleotide is at least 75% of that of SEQ ID NO:1." As discussed above, the polynucleotide recited in claim 31, as amended, comprises at least about 607 nucleotides. In contrast the sequence described in Bonaldo that may hybridize to SEQ ID NO:1 consists of only 523 base pairs. As result, Applicants respectfully submit that Bonaldo does not anticipate or render obvious claim 31. Because claims 32-34 depend from patentable claim 31, Applicants respectfully submit that claims 32-34 are also patentable.

Based on all of the above reasons, Applicants respectfully request that the Examiner reconsider and withdraw the §102(a) rejection of claims 31-34.

Claims Rejections Under 35 U.S.C. §102(b)

On page 8, the Office Action rejects claims 10, 16-21, 24, 28-30, and 36-37 as being anticipated by Bonaldo. Applicants respectfully traverse the rejection.

Applicants have canceled claims 10, 19-21, 24, 28-30, and 36-37 without prejudice or disclaimer, thereby rendering the rejection of these claims moot. Accordingly, withdrawal of the §102(b) rejection of these claims is respectfully requested.

In addition, as noted, Applicants have amended claim 16 to make it dependent from allowable claims 8 and 9. Therefore, Applicants believe that claim 16 is now allowable. Because claims 17 and 18 depend from claim 16, Applicants believe that claims 17 and 18 are also allowable. Accordingly, reconsideration and withdrawal of the §102(b) rejection of claims 16-18 are respectfully requested.

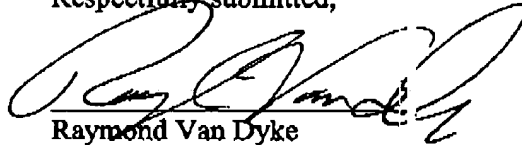
Conclusion

In view of the above amendments and remarks, Applicants respectfully submit that the outstanding rejections have been overcome and the case is now in condition for allowance. Applicants, accordingly, respectfully request that a timely Notice of Allowance be issued in this case. Although Applicants believe that the amount of the enclosed fee is correct, the Commissioner is hereby authorized to charge any payment deficiency to deposit account number 19-2380 referring to attorney docket number 031896-066100.

Should the Examiner have any further suggestions or observations that would facilitate further prosecution or allowance of this case, the Examiner is invited to contact Applicants' representative designated below.

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Respectfully submitted,



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